

Amendments to the Specification:

Please replace the paragraph beginning at page 1, line 10, with the following redlined paragraph:

Electrochemical fuel cells convert reactants, namely fuel and ~~an~~-oxidant fluid streams, to generate electric power and reaction products. Electrochemical fuel cells generally employ an electrolyte disposed between two electrodes, namely a cathode and an anode. The electrodes each comprise an electrocatalyst disposed at the interface between the electrolyte and the electrodes to induce the desired electrochemical reactions.

Please replace the paragraph beginning at page 2, line 13, with the following redlined paragraph:

In a fuel cell, gas sensors, such as hydrogen sensors may be used to monitor the hydrogen concentration in the fuel streams. Instead of simply periodically purging the anode exhaust stream periodically, the anode exhaust could be purged as a result of a measured hydrogen concentration falling below a threshold value. Further, hydrogen concentration may be used as an indicator of the fuel cell performance and operating efficiency. For example, if there is an excessive amount of hydrogen in the fuel stream exhausted from the fuel cell, it may indicate poor operating efficiency. U.S. Patent Application No. 2002/0110713 (now U.S. Patent No. 6,852,434), which is hereby incorporated by reference in its entirety, discloses the use of a gas sensor in the interior fluid passages within a fuel cell assembly or within fluid passages employed to transport reactant fluid streams to or from the fuel cell(s).

Please replace the paragraph beginning at page 5, line 6, with the following redlined paragraph:

Figure 1 is a schematic of a representative acoustic gas sensor 10. A housing 12 is illustrated as a cross-section of, for example, a tube or pipe through which a gas may flow, represented by the arrow in Figure 1. A suitable acoustic gas sensor 10 may comprise two ultrasonic transducers, a transmitting transducer 15 and a receiving transducer 20, positioned in housing 12 and driven by electronic signals, either continuously or in bursts. The transducers 15,

20 are mounted in housing 12 so as to be in the gas to be monitored and positioned a predetermined distance apart, for example 20 cm. A temperature sensor 25, comprising for example, a thermistor, a temperature measuring resistor or a thermocouple, may also be present to measure the temperature of the gas in housing 12. The resulting temperature data may be used to eliminate the temperature dependence of the velocity of sound in the gas. Controller 30 is in communication with transducers 15, 20, and temperature sensor 25, and measures the concentration of hydrogen in the gas.